number of specimens identical with Needham's form from Go Home Bay, Georgian Bay, Ont. (date and collector unknown) and two exuviæ, received from Mr. C. H. Kennedy, form Lake McKinney Tahoe, California. I feel confident that they all belong to hudsonica, in spite of these differences in the development of the dorsal hooks. There is no other species in the Georgian Bay region which this nymph could fit. Leucorrhinia proxima is the only species which could be considered, but it is much larger than hudsonica, whereas these nymphs are all of about the same size.

## EXPLANATION OF PLATE XXV.

Figs. 1-3.—Æshna tuberculifera; 1, female nymph (x2); 2, labium; 3, terminal segments and genitalia of female nymph.

Fig. 4.—Æshna palmata, right supra-coxal processes.

Fig. 5.—Æshna umbrosa, right supra-coxal processes.

Figs. 6-8.—Sympetrum pallipes; 6, lateral view of abdomen; 7, dorsal view of terminal segments; 8, portion of distal margin of lateral lobe of labium.

Figs. 9-12.—Leucorrhinia hudsonica; 9, lateral view of abdomen of exuvia from Nipigon, Ont.; 10, same, from another Nipigon specimen; 11, dorsal view of terminal segments; 12, portion of distal margin of lateral lobe of labium.

## NOMENCLATURAL AND CRITICAL NOTES ON HEMIPTERA.

BY E. P. VAN DUZEE, LA JOLLA, CALIF.

For the past two years, as many of my correspondents know, I have devoted all my spare moments, which have been all too few, to the preparation of a catalogue of the North American Hemiptera. This is now practically completed, but as it is not certain just when it will be in print, it seems best to call attention in advance to certain features of the nomenclature used, partly in the hope that criticism may show oversights and errors in time for correction in the manuscript.

The following synonymy calls for special mention:

Genus Cydnus.—When founding this genus, Fabricius designated tristis (= aterrimus Forst.) as type. Cydnus must therefore November, 1914

replace *Brachypelta* Am. & Serv., which has the same type and the *Cydnus* of Fieber, Signoret, and Lethierry and Sevrin becomes *Aethus* Dall. with *indicus* Westw. as type.

Subfamily **Asopinæ**.—The synonymy of genus *Asopus* Burm. is complicated by an uncertainty as to where it was first published. Kirkaldy claims that it first appeared in Silbermann's Revue, and therefore names *gibbus* Burm. (=cayemensis Lap.) as type, thus making it synonymous with *Discocera* Lap., but Dr. Bergroth in 1911 (Wien. Ent. Zeit., XXX, p. 122) gives us a careful study of the question, and concludes that we should accept argus Fabr. (= malabaricus Fabr.) as the type of *Asopus*, and I do not see that we can do better than to follow him. Where we cannot be certain which of two names appeared first, it would seem best to accept the one which least disturbs a long accepted synonymy and gives us the most rational interpretation of the author's meaning. By adopting the above synonymy we are able to retain the well-known subfamily name *Asopinæ*.

Genus **Perillus** Stal.—This genus was founded in 1862 as a subgenus of *Oplomus* with the species *confluens* H. Sch., *virgatus* Stal, and *circumcinctus* Stal, of which *confluens* has properly been selected as type. I can see no justification for Schouteden's new genus *Perilloides*, as it possesses no workable character except the greater convexity of the pronotum, and I have not recognized it in my catalogue. The sulcation of the tibiæ differs inappreciably, if at all, in the two genera.

Genus Acanthocephala Lap.—The names Diactor Burm. and Metapodius Westw. were both given as substitutes for Acanthocephala Lap., a name supposed at that time to be preoccupied by a family of that name in the Vermes. By the International Rules a family name cannot preoccupy a generic name and Acanthocephala is therefore valid. Metapodius has the same type as Acanthocephala, and cannot therefore be used as a distinct subgenus as was done by Stal, and we must fall back on Metapodiessa, substituted by Kirkaldy for this well-known North American subgenus.

Genus Leptocorisa Latr.—So many changes have been made in this genus that a word of explanation seems necessary. Latreille

founded the genus Myodocha in 1807 with a fair description and named three species; tipuloides (a Leptocorisa), trispinosa (a Cydamus), and fulvipes (an Ischnodemus), but as his generic diagnosis in no way fits any one of these species, it becomes evident that his manuscript must have been mixed and the genus becomes invalid here. In 1810 he corrects this error and names serribes as type of Myodocha, but as this species was then undescribed, the genus is still invalid, but becomes of force the following year, when Oliver describes it as Myodochus and gives a recognizable description of serripes. Leach, in 1815, names tipuloides as type of Myodocha, and is followed in this by Burmeister and Kirkaldy, but this is obviously invalid. The name Leptocorisa first appears as Leptocorise in 1825 (Latreille, Fam. Nat. Reg. Anim., p. 421) as a nomen nudum and not in a Latin form. In 1827 Berthold. in his German translation of Latreille's work, changes the French form to Leptocorixa, but does not describe the genus nor mention a species, so it is still a nomen nudum. In the 1829 edition of Cuvier's Regnum Animalia Latreille first characterizes the genus making it equivalent to Gerris Fabr. (of the Syst. Rhyng.), except vagabundus, but does not state that it is a substitute for that name so it need not have the same type. Laporte in 1832 names his linearis (= filiformis Fabr.) as type, which, being an original species, is valid and must stand.

Genus Corizus Fall.—Brullé, 1835, first fixes the type of Corizus as hyoscyami Linn., and Westwood in 1840 fixes that of Rhopalus Schill. as capitatus Wolff (= subrufus Gmel.). The former is equivalent to Therapha Am. & Serv. and the latter is the Rhopalus of Stal and the Corizus of the Oshanin Katalog. As subgenera, neither are found in our fauna.

Genus Leptocoris Hahn.—On account of the close resemblance of this name to Leptocorisa Latr. it has been renamed three times, and in each case the name was given as a straight substitute for the supposedly preoccupied Leptocorisa, and must take the same type. These names are Serinetha Spin., Lygæomorphus Blanch., and Pyrrhotes Westw. Leptocoris is valid and must stand for this genus, and the tribe becomes Leptocorini, not Serithini. Kirkaldy, in Proc. Hawaiian Ent. Soc., vol. II, p. 123, 1910, has established a new subgenus of Leptocoris as Boisea. He founds it in but few

words on colour characters and a "slight margination of the pronotum, etc.," for "vittata." The only vittata in this genus is already the type of the synonymic genus Tynotoma Am. & Serv. Both his new subgenus and his species "vittata" are absolutely unrecognizable, except as we may assume that his disconnected remark concerning an American species of Leptocoris may refer to this, and thus identify his "vittata" with trivittata Say. Kirkaldy was very severe in his criticisms of others for the use of colour characters and incomplete descriptions, but no one used colour characters more or gave us more fragmentary and unrecognizable descriptions. It is greatly to be hoped that some competent Hemipterist will work out Kirkaldy's oriental genera and species while the types are still available and thus locate, and I might say validate them, for us.

Genus Neides Latr.—Latreille founded Neides in 1802 with two species, tipularius and clavipes, and in 1810 named tipularius as its type. Fabricius founded Berytus in 1803, and then named tipularius as its type. I can see no reason why these genera should not be considered strictly identical and every writer so far as I can learn so considered them until 1860, when Flor divided the genus. placing clavipes in Neides, founding Sphalerocoris for tipuloides and restricting Bervius to rufescens. Fieber the next year retains Neides for tipularius and its allies, and Berytus for clavipes and its allies, in which he is followed by Puton (1886), Lethierry and Sevrin (1894), and Oshanin (1906 and 1912). Reuter (1888), on the contrary, places tipularius as the type of Berytus and clavipes as the type of Neides, and in this is followed by Bergroth in 1906. I believe Kirkaldy was entirely right in considering these genera as homotypical and that he was justified in renaming Berytus Fieb. as Berytinus. The family thus becomes Neidida, not Berytida. Most European Hemipterists seem to have overlooked genus Podicerus Dumeril founded in 1824 with tipularius as type. In the Journal of the New York Entomological Society for 1911 (Vol. XIX, p. 24), Mr. H. G. Barber places my Jalysus perclavatus as a synonym of Hoplinus multispinus Ashmead, and suggests that my redescription of the species was owing to the poor characterization of Ashmead's species. This, however, does not fully state the case. The difficulty here is that Ashmead's description does

not at all correspond with his supposed type now in the National Museum. I did in this case as I have always done, followed the description rather than the supposed type. It is inconceivable that any one who pretends to know anything about the Hemiptera would describe a Jalysus with unarmed connexivum and pronotum and membranous elvtra in a genus belonging to a distinct subfamily and having the connexivum and pronotum long-spinose and the corium coriaceous and punctate. Ashmead also distinctly describes the head as trispinose. Characters omitted may be charged to an oversight, but non-existent structural characters cannot be added. His name multispinus could hardly apply to any Jalysus. I fail to see how the ends of science can be advanced by trying to connect Ashmead's description with his supposed type, and in my catalogue I have retained my species, leaving Ashmead's as a still unknown species of Hoplinus. Mr. Barber also sinks my Jalysus wickhami as a straight synonym of spinosus. It, however, readily separates out as the western form of spinosus. The typical form of this species I have not seen from west of the Rocky Mts., although in Texas the two seem to intergrade and may do so wherever their habitats overlap.

Genus Lygaeus Fabr.—This genus was founded by Fabricius in 1794 to include a heterogeneous assemblage of species that he could not satisfactorily locate in his other genera, or so it looks to us. Lamarck in 1801 named equestris as its type, and in 1803 Fabricius indicates tenebrosus as the typical species. Kirkaldy and others claim that his repeating the generic characters in his description of valgus in 1794, but without italics, was a valid naming of the type. An argument in favour of this is found in the fact that he did not repeat these type indications in the case of two of the five genera so distinguished in his Systema Rhyngotorum, but in Lygaus and one other genus he has indicated a different species as type in his later work, which in a measure will offset Kirkaldy's contention. In these two cases of double type-fixation, if such they be called, I think we should ignore both and take the next valid fixation, which in the case of Lygaus is equestris, and in the case of Gerris, the other genus referred to, is lacustris. This procedure, which I believe is perfectly justifiable and logical, conserves these names for the genera as almost universally used since the time of Latreille, and in the case of Lygæus makes that genus synonymous with Graptolomus Stal and Eulygæus Reuter. Most European entomologists accept Laporte's indication of familiaris Fabr. as type of Lygæus or follow Kirkaldy in considering Lygæus a Coreid genus with valgus as type, but I think the solution here given much more reasonable and better in every way.

Genus Artheneis Spin.—Dr. Horvath (Ann. Mus. Nat. Hung., VIII, p. 11, 1910) has shown conclusively that the type of this genus should be *foveolata* Spin. Kirkaldy had no reason to name *cymoides* as type and thus to make this genus supercede *Nysius* of Dallas.

Genus **Perigenes** Dist.—I have examined a long series of *Perigenes constrictus* Say from the Northern and Middle States, and have been unable to detect a distinct lunate vitta on the venter of any, although there is a structural fullness at that point which in rubbed specimens has somewhat the aspect of a vitta. The southern specimens sent to me as *Ligyrocoris constrictus* Say have proved to be *abdominalis* Guer. Say's species as represented in the collection of the Boston Society of Natural History is an undoubted *Perigenes*. It is questionable whether this lunate vitta should be considered as a generic character, as genus *Ligyrocoris* as now constituted contains species of at least four genera: *Sphærobius*, *Heræus*, *Orthæa*, and *Perigenes*, and separable therefrom only by this lunate vitta. In my catalogue I have been unable to quote a number of the locality records on account of the mixing of the species.

Genus Orthæa Dall.—Say's name Pamera, used by Stal for this genus, published in 1832 as a straight substitute for the preoccupied Pachymerus Lep. & Serv., a palæarctic genus. The same year Laporte published the name Arphanus as a substitute for this same preoccupied name. I know no way to determine for certain which of these works appeared first and personally prefer to use the name Aphanus for two reasons: Laporte's paper was a systematic work in which the author undertook to name a type for each of the Heteropterous genera known to him and for this genus he names rolandi Linn., which was one of the original species and a perfectly valid type fixation. Say's work was a

faunal paper, and as he names no type nor original species, his name must follow the first valid type fixation for genus Pachymerus, which was that of Laporte mentioned above. A further and strong reason for accepting Laporte's name is that Say's name Pamera has long been used for a quite distinct assemblage of species, and the transfer of the name would cause serious confusion. It may be well to add here that while Say's paper on the Heteropterous Hemiptera was dated 1831, only the first eight pages were published that year as we are informed by Fitch (2d Annual Rept. N. Y. St. Entomologist, in Trans. N. Y. St. Agricul. Soc., Vol. XV, for 1855, p. 523). The next name quoted by Stal for Pachymerus is Stenocorius Ramb., which is equivalent to Paromius Fieb. It was established in 1842, not 1838 as cited by Stal, and is preoccupied by Stenocoris Burm. published in the supplement to the Handbuch, Vol. II. part 2, p. 1010, 1838. This leaves Orthwa Dall, the first valid name for the genus with consuta Dall, as type. It may be noted in this connection that the genera Calyptonotus and Aphanus in the Oshanin Katalog must be reversed. The name Calvptonotus Dougl, and Scott was published as a substitute for Rhyparochromus Fieb. (and Am. & Serv.) and therefore takes as type alboacuminatus Goeze. I cannot find that this genus is represented in our fauna.

Genus Astemma Lep. and Serv.—This genus was founded simultaneously by Latreille and Lepeletier and Serville in 1825. Latreille's genus was without description or species and consequently was a nomen nudum until 1829, when in the edition of Cuvier's Regnum Animalia of that year he gives it a short diagnosis and names two species: Salda pallicornis and flavipes of Fabricius, the latter a Geocoris not answering to Latreille's diagnosis of his genus, so the former must be taken as the type making it equivalent to Halticus Hahn, 1831. Lepeletier and Serville founded their genus Astemma in the tenth volume of the Encyclopia Methodique, naming several species and describing cornuta as In 1832 Laporte designates königi Fabr. as the type of Astemma, but not being an original species, this type fixation is invalid. Kirkaldy in 1909 names apterus Linn, as type of the Astemma of Lep. & Serv., but this certainly is invalid, as Stal had in 1870 restricted the genus to cornuta and its allies, as he had a perfect right to do, and thus making it a valid genus related to Largus, with cornuta as type.

Genus Phymata Latr.—I wish to call attention here to the fact that Handlirsch in his monograph on this genus has, perhaps inadvertently, renamed the typical subspecies of Phymata erosa as linnei Handl. Under the International Code it must be known as Phymata erosa erosa Linn. with linnei as a synonym. It also seems to me unquestionable that Stal was right in assigning Wolff's description and figure of erosa to our northern form which he renames wolffi and of which subspecies pennsylvanica Handl. is a straight synonym. Subspecies fasciata Gray is undoubtedly the southern form included doubtfully by Stal under wolffi. Subspecies fasciata Stal has been rightfully renamed by Handlirsch, who calls it communis, assuming that he has correctly located it. I am unable to understand why subspecies chilensis Handl. should not be known as carinata Fabr., but as this form is from outside our territory, I will leave this for others to work out.

Genus Reduvius Fabr.—This genus was founded by Fabricius in 1775 without designation of type. In 1801 Lamarck names bersonatus Linn, as such type, a valid type-fixation having priority over Fabricius' designation of fuscipes in 1803. While Stal was wrong in accepting fuscipes as type of Reduvius, he was certainly right in using angulosus Lep. & Serv. as the type of Harpactor Lap., who distinctly names that species as type when founding the genus. For the large genus Reduvius of Stal and Lethierry and Servin (= Harpactor of Am. & Serv.) we must use the name Rhynocoris Hahn, 1834, with cruentus Fabr. (= iracundus Poda) as the type. Our American species belong to this last genus. Of the numerous subgenera used by Stal in this genus, I would! recognize but four or five, reducing the others to synonymy. The subfamily Reduviina of Stal, 1872, must take the name Harpactorinæ, as that was the first name given to the group. It has been so used by Amyot & Serville, Spinola, Dohrn, Puton, Lethierry and Servin, Champion and Oshanin. There are two fairly well marked tribes in this subfamily, the Harpactocorini with the mesopleura tuberculate and the Zelini without the mesopleural tubercle. The former was named Hezeda by Stal in 1859, but as I understand the International Code the typical subfamily or tribe must bear the name of the typical genus the same as a subgenus, including the typical species of the genus must bear the name of the genus. The second tribe was called *Reduviida* by Stal, but has been properly designated as *Zelini* by Bergroth and others.

Genus Ectrichodia Lep. & Serv.—Kirkaldy (Entomologist, XXXIII, p. 239, 1900) goes into an elaborate explanation of why he names *Reduvius cruciatus* Lep. & Serv. as type of *Ectrichodia*, all of which was quite unnecessary as Laporte had already named this species as its type (Essai, p. 7, 1832) and Brullé did the same in 1835 (p. 320). This generic name must therefore replace the old-world genus *Physorhynchus* Am. & Serv. and *Ectrichodia* of Stal must be known as *Rhiginia* Stal with *lateralis* Lep. & Serv. as type. The name of our northern *cruciata* Say, described as a *Petalocheirus*, is not preoccupied by *Ectrichodia cruciata* Lep. & Serv. and will stand as *Rhiginia cruciata* Say.

Genus Nabis Latr.—This genus was founded by Latreille in 1802 with two species mentioned, guttula and vagans Fabr., the latter a synonym of ferus Linn. I cannot find that the former was named as type until Kirkaldy did so in 1900. Vagans was named as type of Nabis by Westwood in 1840, and I cannot see why this type fixation is not valid. Reduvius apterus Fabr: was named as type by Latreille in 1810, Laporte in 1832, and Spinola in 1837, but is invalid as apterus is not an original species. Latreille in 1804 and 1807 named apetrus (= subapterus) and guttula as examples, but this cannot be considered as a proper type fixation for guttula. Nabis then = Coriscus Auct., = Reduviolus Kirby, with type vagans = ferus Linn. Prostemma Lap. = Nabis Stal, 1873, and Reuter, 1908 and 1909, type guttula Fabr.

Genus Cimex Linn.—This generic name is now so universally used for the "bed-bug" that it seems unnecessary to notice it here further than to draw attention to the fact that Kirkaldy's very positive statements that Cimex was not and could never be available for lectularius were founded on a careless and imperfect knowledge of the bibliography of this genus and species. Brünnich restricted genus Cimex to lectularius eleven years before Fabricius founded genus Acanthia and restricted Cimex to the Pentatomidæ,

and furthermore Lamarck named *lectularius* as type two years before Fabricius indicated *rufipes* as type of *Cimex*, so I cannot see that there is any case for discussion. My copy of both Brünnich and Lamarck are from the Kirkaldy library, and are annotated by him, and he could soon have learned these facts had he tried.

Family Capsidæ.—It seems to be quite the vogue now to follow Kirkaldy and call this family after the oldest genus, Miridæ. This Kirkaldy system is illogical to me as I have stated above, and I would not revert to it did it not seem best to refute Reuter's statement of 1910 that the name Miridæ Brullé, 1835, has priority over Capsidæ Burm., 1835. In the first place every indication I can discover of the date of these two works show that Burmeister's appeared first, but that would not effect the present case as Brullé's name was in the French form and was not latinized at all. If we accept vulgar names, we must go back to Hahn's Wanzenartigen Insecten, Vol. I, 1831, where we find the family called Mirides. However, I think Dr. Horvath was perfectly right in discarding all names, not given in the Latin form. By this system the name Capsidæ has clear priority and practically universal usage until Kirkaldy devised his system for unstabilizing family nomenclature.

Genus Saida Fabr.—This genus cannot be considered without first locating Acanthia. Fabricius founded Acanthia in 1775 for lectularius and its allies without indication of type. Latreille in the "Precis," 1796, restricts Acanthia to those of Fabricius' species which inhabit the borders of ponds and streams, but names no species nor type. As it is impossible to name a type from such a statement, his restriction has no value. In 1801 Lamarck identifies Acanthia with Cimex and names lectularius as type. year Latreille still clings to his delusion and describes genus Acanthia for littoralis and zosteræ Fabr. One year later Fabricius, perhaps as a protest against Latreille's misuse of his genus, restricts Acanthia to lectularius and hemipterus and indicates the former as its type. At the same time he founds his genus Salda for the littoral forms with zosteræ as type. This disposition of these species by Fabricius was perfectly valid, and I have so used them in my catalogue. Recently Dr. Reuter has broken up genus Salda, very properly restricting Salda to zosteræ and its allies, but still retains Acanthia for the littoral species with saltatoria Linn, as type. In accepting

Acanthia in the Fabrician sense as indicated above we find the largest genus in the family without a name and I therefore propose to call it **Saldula**. As a substitute for *Acanthia* of Reuter (Of. Finska Vet. Soc. Forh., Afd. A, No. 12, p. 14, 1912) it takes the same type, *saltatoria* Linn. Nineteen North American species belong to this genus.

Genus **Dictyophara** Germ.—Melichar in his recent monograph on this subfamily places our American species in Stal's genus *Nersia*, which he considers as distinct. Our species are, however, entirely congeneric with *Dictyophara europæa* Linn. and must be retained in this genus.

Genus **Ticida** Uhler.—I now find that my *Loxophora transversa* is a synonym of *Ticida cingulata* Uhler and my genus therefore becomes a synonym of *Ticida*. I was mislead by Uhler's placing his genus in the *Issida*.

Genus Otiocerus Kirby.—I do not accept Kirkaldy's statement that Vol. XIII of the Trans. of the Linnean Society was published in 1822. The first pages containing Kirby's paper undoubtedly appeared in 1819 or very early in 1820. Germar accepted Kirby's name as the earlier and we must do the same.

Genus Cicada Linn-When publishing my note on this genus in 1912 I did not realize that it was Lamarck's intention to name types in this work of 1801, and finding Cicada without a valid type. named tibicen as such type. There is no doubt, however, but we must accept orni Linn as type of Cicada as named by Lamarck, thus making the genus equivalent to Tettigia of Kolenati. There is an additional reason for our doing this in the fact that Linneus named this section of his genus Manniferæ from the "manna" produced by this insect, which is perhaps the most common European Cicada. This is in accord with the Linnean method of restricting his genera to the best known or officinal species. What then shall we do with genus Cicada of Stal and other writers? Latreille in 1825 establishes genus Tibicen for plebeja Scop., but without description. The question is: Was Tibicen properly established by the simple naming of a well-known species in 1825, or must it be held over until 1829, when one distinguishing character (of no value) was given and four species (belonging to three genera)

are named? Amyot and Serville take the latter view and name hamatodes as its type. The genus can, however, be much more accurately recognized by the naming of plebeja in 1825 than by the characters and species mentioned in 1829, and I think we should accept plebeja as its type. Many recent writers ignore Tibicen entirely, but this cannot be done. Either it is equivalent to the Cicada of Stal with plebeja as type or Tibicina Kolen. with hæmatodes as type. Another question arises in studying this case. Fabricius, who uses Tettigonia Geoff. in place of Cicada Linn. indicates tibicen as its type, and I am not certain but we should consider this a valid naming of a type for genus Cicada of Linn. This, of course, would antedate Latreille's genus Tibicen and leave genus Cicada as it was understood before Distant founded his genus Rihana. I can find no ruling on this in the International Code, and therfore for the present use Cicada for orni, largely on the assumption that Linneus intended that for the type of his section Mannifera, and Tibicen for plebeja. Latreille in 1810 names plebeja as type of genus Cicada Linn., but as it was not an original species, this is of course invalid.

Genus **Philænus** Stal.—As I understand the International Rules, a variety name is preoccupied by an earlier species name in the same genus. This necessitates our changing the name of *Philænus leucophthalmus* var. *lineatus* Linn. for which I now propose the name *fabricii*; and we must also change the name of what was formerly the typical *spumarius* of Fallen ,which I propose to call *falleni*. Both of these colour varieties occur in our fauna.

Genus Ceresa Am. & Serv.—The name aculeata was used in this genus by Fairmaire in 1846, so I now propose the name stimulea for the Ceresa aculeata published by me in 1909.

Genus Stictocephala Stal.—I cannot find that a type has been named for this genus, so I now name *lutea* Walk as such type, as it is the best known species mentioned by Stal when founding the genus.

Genus Campylenchia Stal.—I do not feel at all convinced that our North American *latipes* Say is identical with the South American curvata Fabr. and have retained it as distinct in my catalogue. Genus **Bolbonota** Am. & Serv.—Fowler's name *aureosericea* preoccupied in this genus by *aureosericea* Stal, and for the former I propose the name **dubiosa**.

Genus **Gypona** Germ.—*Gypona bimaculata* Woodworth, 1887, is preoccupied by *Gypona bimaculata* Spangberg, 1878, for the former I propose the name **woodworthi**.

Genus Euscelis Brullé.—Genus Athysanus Burm., 1838, type argentatus Fabr., is scarcely separable from Phrynomorphus Curtis, 1833, type lineolatus Brullé. It seems, however, that both must fall before Euscelis Brullé, 1832, type lineolatus Brullé. I have not been able personally to examine Brullé's work, nor can I learn that there is a copy in this country, but he seems to have established his genus for lineolatus, and as his genus has recently been recognized by Dr. Horvath, it is evidently a valid genus, I recognize the following subgenera: Athysanus Burm., type argentatus Fabr., Euscelis Brullé, type lineolatus (= Conosanus Osb. and Ball), Conomellus Osb. and Ball, types bicolor Van D.

## NOTES ON SCIAPUS, WITH DESCRIPTIONS OF THREE NEW SPECIES.

BY M. C. VAN DUZEE, BUFFALO, N. Y.

## Sciapus forcipatus Ald.

Three males from Guatemala differ from Prof. Aldrich's description in having the knob of the halters, lamellæ of the hypopygium, and hind tibiæ yellow; and in having the wings marked with the usual two cross bands, although these bands are not very dark or well defined. The two long bristles at the tip of the abdomen seem to be composed of two or more fine hairs so closely twisted together as to appear as one, in one specimen these hairs are partly separated; the middle tibiæ have two long bristles, one at the middle and one at apical fourth; the middle tarsi in one specimen have two rather long bristles, and several smaller ones on the first joint; all the femora have long white hairs below, the middle pair have also the black bristles mentioned by Aldrich.

I feel quite certain that these differences are not of specific value; in fact, hardly sufficient to warrant separating it as a variety.

November, 1914